

4. LAND USE PLANNING

"The Legislature finds and declares that California's land is an exhaustible resource, not just a commodity, and is essential to the economy, environment, and general well-being of the people of California. It is the policy of the state and the intent of the Legislature to protect California's land resource, to insure its preservation, and use in ways which are economically, and socially desirable in an attempt to improve the quality of life in California" (Government Code, Section 65030).

"The Legislature also finds that decisions involving the future growth of the state, most of which are made and will continue to be made at the local level, should be guided by an effective planning process, including the local general plan, and should proceed within the framework of officially approved statewide goals and policies directed to land use, population growth and distribution, development, open space, resource preservation and utilization, air and water quality, and other related physical, social, and economic development factors" (Government Code Section 65030.1).

These Government Code Sections are the cornerstone of land use decisions in California. Since 1963, CDF has taken an active role in the development of statewide resource protection and life safety policies, as well as influencing local general plan development and implementation. Local fire jurisdictions should become actively involved in developing, editing and implementing local land use planning laws and decisions. These are prime opportunities to implement positive wildland and structural fire prevention to benefit a community. This will help communities to 1) resolve problems before they become difficult, and 2) plan for the future.

In most jurisdictions, the responsibility and authority for regulating land use and development rests with the county or individual community. Guiding these development and land use decisions are master plans or general plans, which in many cases are legally mandated. General plans provide a master policy template to guide growth and provide the authority for other local controls such as planning and zoning laws and local ordinances. Most planning documents include: 1) a data and analysis section, where local hazards, risks and fire protection capabilities are identified, 2) a policy section, that provides broad direction to resolve a problem or implement a solution, and 3) implementation measures, such as applying a local ordinance.

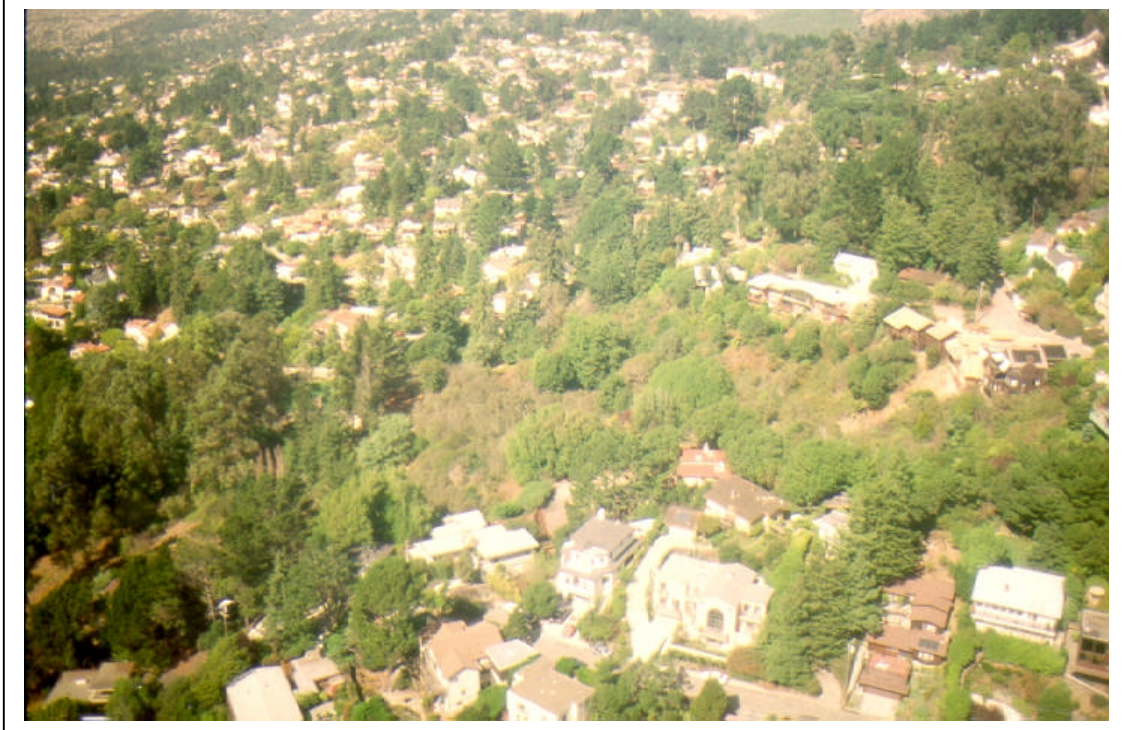
4.1 Development Plans

General plans and the resulting area plans, zoning ordinances and fire prevention ordinances can mitigate the impact of new housing and subdivisions on a department's ability to provide fire protection.

Results may include interior and exterior life safety measures, wildland and structural fire prevention systems, mitigation fees, maintenance prescriptions to keep the required measures operating and in place, restrictions on road design, and enhanced water supply systems.

In conjunction with the local building code, these measures can address individual parcels as well as individual residences and commercial occupancies. Where remodeling occurs, or in the case of existing structures that do not meet today's standards, it is more difficult to achieve results, but even these can be handled by a local ordinance, depending upon the political and economic mood of the community.

The key is to talk to those who make the decisions, educate them, become active in the land use process, maintain continued involvement and be reasonable to their needs. Suggested planning references include *Fuel Modification Plan Guidelines for High Fire Hazard Areas* developed by the Orange County Wildland/Urban Interface Task Force Subcommittee on Fuel Modification and the *Subdivision Map Act Manual and California Land Use and Planning Law* available through Solano Press in Point Arena.



Photograph 4.1.
Major Development within California Wildland

Fire safe regulations are implemented via the local government building permit and subdivision map approval process. Because local government is the approval authority for development, these regulations are triggered by the application for a building permit for purposes other than limited remodeling. These include but are not limited to submittal of a subdivision map, application for a use permit, siting a mobile or manufactured home, or constructing a road.

4.2 County General Plans

California law (Government Code Section 65030.1) directs that future growth decisions shall be made at the local level, guided by an effective planning process (general plan, etc.) and statewide land use goals and policies. Many opportunities for design, direction and improvement of fire and resource protection are found in the general plan.

The county general plan provides: 1) long-term plans for growth, 2) local controls over development, 3) protection of public health and safety, and 4) descriptions of community values and future expectations. The courts have defined the county general plan as the constitution for local development. It is the master document that governs land use. All land use must comply with the general plan, and the general plan must be consistent internally. The Governor's Office of Planning and Research distributes guidelines for development of county general plans, including specific directions on mandatory elements and issues, including the safety element provision for wildfire safety. Each county develops its own general plan and

elements that accordingly address local issues of growth.

4.2a Fire Safe Requirements

Government Code, Section 65302(i) requires all counties to address fire safe standards in the safety element of their general plan, specifically: evacuation routes, peak load water supplies, minimum road widths and clearances around structures. This was to be completed by 1974. Most counties did address some level of fire safe measures in their general plan. However, many did not. Even where they did address fire safe standards, the standards vary widely in content and effectiveness. On the other hand, several counties have adopted strong fire safe ordinances that require significant fire prevention measures. CDF, as the fire agency responsible for protecting SRA, believes that firefighter safety is an issue that crosses governmental boundaries and requires statewide attention. The following discussion details required and recommended activities.

Information on the county general plan, the development process and strategic fire planning can be found in [*A Discussion of the County General Plan and the Role of Strategic Fire Protection Planning*](#), prepared under contract for CDF on September 30, 1989. Additional information is included in these Governor's Office of Planning and Research publications: [*Planning, Development and Zoning Laws*](#); [*County General Plan Guidelines*](#), and [*CEQA: The California Environmental Quality Act, Statutes and Guidelines*](#). Summaries and excerpts from these documents will follow.

Six of the mandated seven elements are pertinent to the wildland fire prevention and protection mission. These are described with comments on their importance to fire and resource protection, along with some sample evaluation criteria.

4.2b Land Use

The land use element "dedicates" lands to particular purposes. It tells how the jurisdiction will designate and separate various uses such as commercial, industrial and residential. Natural resource, agriculture, timber production and flood plain areas (if any) must be included. A major intent of the element is to design developments that are compatible with one another. That is, heavy industrial areas should be separated from, and not adjacent to, residential areas. On the other hand, light commercial or shopping center designations may be compatible with residential uses. Sometimes, commercial areas are set aside as buffers or gradual-change areas between residential and industrial uses.

Examination of the land use element in conjunction with wildland areas may reveal current or future conflicts with fire and resource protection. All too frequently, the compatibility of land uses is compromised where development and wildlands meet. All types of uses might be designated in or adjacent to hazardous fire areas without buffer zones or other mitigating measures. Land use policies should consider and reduce these conflicts. Since zoning districts are derived from land use designations, it is important to assure that those designations, policies, and ordinances are compatible with wildland protection. For example, residential, open space, agriculture and timber preserve land uses could be designated to include fuel break and fuel reduction zones.

When evaluating a land use element, one should consider the following questions:

- Does the land use element include wildland fire risks and hazards in the data and analysis section?
- Do policies include reduction of hazard levels by various methods?
- Are recreation areas (parks, golf courses) and agricultural uses (pastures, irrigated tree farms) located to provide buffers between development and wildlands?

4.2c Housing

The housing element determines how the government will regulate density and intensity of residential development. It includes provisions for low income and handicapped needs. In some cases, it may actually allow lower standards of design and construction to encourage affordable housing. In hazardous areas, this element could conflict with fire safe development. Access, construction standards and design requirements may be reduced by the jurisdiction in an effort to provide affordable housing. Alternatively, safer areas should be designated for this type of development.

When evaluating a housing element, one should consider the following questions:

- Does the data and analysis section describe vulnerable, unsafe areas for "sub-standard" housing?
- Do the policies recognize those areas and prohibit this type of development there?
- Are construction standards in accord with defined fire prevention needs (access, roofing, fire flow)?
- If not, what compensating mitigation measures are required to provide safety?

4.2d Circulation

The circulation element delineates the general location of existing and planned transportation routes and public utilities. Designations, policies and implementation measures in this element (and all others) must be consistent with the land use element. The information is usually shown on maps or diagrams to show how the transportation system serves the various land use designations. This element is the primary guide for access routes and road design requirements (not engineering standards). Government Code Section 14000 requires that the circulation element provide transportation facilities that reduce hazards to human life and minimize damage to natural resources. This provides the opportunity to make strong recommendations about transportation routes and design requirements such as turnouts, helispots and safety zones.

When evaluating a circulation element, the following questions should be considered:

- Does the element plan for satisfactory access to high hazard areas?
- Are standards high enough to provide safe evacuation from residential (and other) land use areas?
- Are policies defined to limit the number and length of one-way roads?
- Are heliports and helispots designated in areas to facilitate suppression and other emergency needs?

4.2e Conservation

The conservation element describes how the jurisdiction intends to protect and conserve its natural resources. It should discuss water, soils, forests, wildlife and fisheries. Potential fire and flood impacts on all resources should be included. This element ties directly to the life, property and wildland fire prevention and protection mission. It should be written to support that mission. As with all other elements, this one must be consistent with the general plan. It must explain natural resource management policies in a way that makes sense alongside other land use policies. In some counties, urban bias shows itself quite clearly in this element, when only local wastelands, rocky ridges, and impassable canyons are included in the conservation element. This is not the intent of the Legislature nor planning and zoning laws.

When evaluating a conservation element, consider the following questions:

- Is the element consistent and logically applied, or does it just gather up unusable areas and "lump" them into a conservation category?
- Does the element discuss resource values?

- Are potential resource losses from fire (soil loss, sedimentation, local flooding, timber production, wildlife habitat, etc.) included in the data and analysis section?
- Do policies include management options of prescribed fire and fuel breaks to enhance protection?

4.2f Open Space

The open space element designates areas for preservation and managed production of natural resources, outdoor recreation, and public health and safety. The open space element is related to the conservation element in some ways, and designated lands in either element could be actually or nearly the same. The important difference between conservation and open space elements is the very specific inclusion of public health and safety requirements in open space. Government Code Sections 66560-66564 dictate that this element should include designation of "areas that require special management because of fire risks." These sections of the Government Code authorize the connecting or linking of these areas into complete networks in the interest of public safety. The open space element offers an opportunity to analyze conflagration potential and to design fuel break and fuel reduction zones, helispots, access and water systems into strategic fire defense improvement systems. Developers can be required to construct and maintain these improvements. Inclusion of strategic defense improvements in the open space and safety elements will lead to zoning for such improvements and eliminate the owner-by-owner agreements and public agency financing now necessary for construction and maintenance.

When evaluating an Open Space element, one should consider the following questions:

- Does the element relate to fire safety and suppression effectiveness?
- Is it consistent with the land use, safety and conservation elements to provide integrated and systematic resource and public protection improvements?
- Does it contain policies and implementation measures requiring dedication, construction and/or maintenance of these improvements on all projects?

4.2g Safety

The safety element defines community protection in relation to fire, seismic and geological hazards. It must include provisions for evacuation routes, water supply, minimum road widths and clearances around structures. It should include mapping of fire hazard severity zones and could include analyses of minimum suppression resources required. The safety element can be used to strengthen or further justify other elements. It is an excellent place to include project design requirements for reducing hazard levels and to provide for mitigation measures not included elsewhere in the general plan. It may also be used to justify zoning for strategic fire defense systems.

When evaluating a safety element, the following questions should be considered:

- Does the element correlate with others to provide for the best and safest suppression actions? Does it recognize evacuation needs?
- Does it address the traditional suppression problems and include policies and implementation measures to eliminate those problems?

During 1989, the Legislature applied some effective "band-aids" to the Urban-Wildland Interface problem. Per Senate Bill 186, each county is now required to submit any revisions of their General Plan safety element to the California Board of Forestry for review and comment. If the county fails to implement the Board's comments, they must state why. CDF staff members also successfully encouraged the Governor's Office of Planning and Research (OPR) to address significant strategic wildland fire prevention and protection methods in their 1991 edition of the *General Plan Guidelines*. This document guides the

development and update of general plan elements by counties.

4.3 Actions You Can Take to Improve Land Use Plans

Again, the key is to be active in the land use planning process. Talk to the decision-makers, educate them about fire safety issues and be reasonable about their needs.

- A. Review comprehensive land use plans prepared in advance of development. These should be prepared and reviewed as soon as fire hazard areas are considered for development. This way, problems can be resolved before the proposed development has begun. Situations hazardous to life and property resulting from lack of land use planning are often very difficult to correct. In such cases, all those concerned must acknowledge and accept the level of risk and probable damage from wildfires.
- B. Conduct fire prevention planning for large cohesive units in conjunction with planning drainage, soil erosion, flood control and sanitation. Fire prevention planning is necessary for safe development of watershed areas. Develop examples of how to apply planning to an actual problem area to illustrate the basic relationship of fire prevention to the development of mountainous, grassy and brush-covered land. Such examples or area models may encourage a mutual understanding of fire planning principles between planners, land developers, builders and regulatory agencies of government.

A good source for more information is the City of Hayward [*Hillside Design and Urban/Wildland Guidelines*](#).

- C. Use Fire Hazard Severity Zones to specify conditions under which the use and development of specific areas can occur. A hazard classification system can also provide a basis for detailed zoning. In addition, future use of the California Fire Economics Simulator (CFES) as part of a series of analytical programs may help identify the effects of a specific development, whether fire safe or not, to CDF's wildland fire prevention and protection mission. Encourage local government to adopt and enforce the standards specified in this guide. If circumstances warrant, develop more restrictive standards in conjunction with local jurisdictions. In SRA there are three levels of fire hazard identified. Very High is the most critical, and proposed developments in these areas need special attention. The CDF system uses weather, fuels, and topography to rate each area. In LRA, the same system has been used with structural density and points added or subtracted for other criteria. If the proposed development is adjacent to Federal Lands, the appropriate authority should be contacted to ascertain whether the Federal Lands have been rated (there currently is no common system in use by Federal agencies). For more information about hazard assessment and severity zones, refer to the *Wildland Fire Hazard Assessment* publication at <http://www.prefire.ucfpl.ucop.edu/izhazard.htm>.
- D. Review proposed lot splits, subdivisions and other developments for fire prevention and protection needs in conjunction with water, road, health and flood control authorities. Make planning recommendations for large-scale housing or planned-unit developments, not just for traditional subdivisions. Review new development, appropriate variances and use permits to assure an acceptable level of fire safety. Also review changes in zoning related to land use and development density, as well as area and specific plans or other long and short-range plans.

- E. Recognize and confer with the fire protection agency where the project is located when establishing conditions for use or development of an area. Local fire protection agencies, along with local planners, can recommend a comprehensive land use system which recognizes special fire problems and requirements related to vegetation, topography, weather, transportation systems, water supply systems, building density, hazard reduction and risk. The overriding concern in developing recommendations is to emphasize the protection of life and property from wildfire and prevention of damage to adjacent watersheds and other natural resources. Be sure to consider the cost versus risk analysis and economic impact of any recommendations.



Photograph 4.2.
Special Fire Problems in Rural Areas

- F. Require the developer to provide at least two access routes during each phase of a large development. Require the developer to provide fire prevention and protection measures throughout the entire project. Include current and projected fire protection needs, including fire facility sites, in all development plans. Require assurance bonds of performance to ensure that developers provide fire safe measures that give new residents a reasonable level of protection. The value of assurance bonds should be sufficient to compensate for increased costs due to inflated values over the duration of the development. Require developers to hire a licensed urban forester to oversee the management of vegetation during development. The urban forester can assist with planning the location of parks, golf courses, utility corridors, roads, streets and landscaping with fire prevention and protection in mind.

The functional placement of greenbelts--areas of managed vegetation kept irrigated and constantly green--can reduce the vulnerability of a development to wildfire at little cost. Include permanent greenbelts or fuel breaks in the plan, and assign the responsibility for maintaining these areas so that the benefits of such measures are guaranteed in the future.

- G. Review any division of land into two or more parcels for the purpose of lease, sale, conveyance or

transfer, whether immediate or future, which is not defined as a subdivision. This will assure that fire safe standards are applied to high fire hazard areas developed outside of major subdivisions. Counties may apply the same requirements to major and minor subdivisions, such as road and water requirements, but many choose to apply alternative strategies to “4x4s” and other parcel splits. For more information refer to the *PRC 4290 Guidebook*.

- H. Design fire prevention planning measures such as emergency access roads, emergency water storage, heliports, safety islands, fuel breaks and vegetation management as part of an overall fire defense system to facilitate fire control. Fuel management modifies the threat posed by vast areas of vegetation either by reducing the available fuel through prescribed fires, or by converting the vegetation to a type that is less hazardous. Treat all wildland adjacent to an inhabited area to reduce the conflagration hazard. Various measures can break up broad expanses of vegetation into manageable segments. Encourage wildland fire protection agencies to perform and assist landowners in such treatments. Also encourage cooperative land management planning efforts for land treatment systems, community firebreaks and facilities for the mutual defense of both the community and natural resources. Contact CDF and local fire departments for additional information and assistance.